

What is claimed is:

1. An organic light emitting diode device, comprising:
  - a substrate;
  - a first electrode formed on the substrate;
  - an organic electroluminescent function layer formed on the substrate;
  - a trench pattern formed adjacently to the function layer; and
  - a second electrode layer formed on the function layer and the trench pattern.
2. The organic electroluminescent device according to claim 1 wherein the function layer contains any one of polymer and oligomer, each having an amine derivative structure.
3. The organic electroluminescent device according to claim 1 wherein different types of dopant are contained in areas of the function layer, the areas being adjacent to each other while being spaced by a wall of the trench pattern.
4. The organic electroluminescent device according to claim 1 wherein a doping concentration in the function layer under the wall forming the trench pattern is lower than in other portions.
5. The organic electroluminescent device according to claim 2 wherein a doping concentration in the function layer under the wall forming the trench pattern is lower than in other portions.

6. The organic electroluminescent device according to claim 3 wherein a doping concentration in the function layer under the wall forming the trench pattern is lower than in other portions.

7. A method for manufacturing an organic light emitting diode device, the method comprising the steps of:

forming a first electrode on a substrate;

forming an organic electroluminescent function layer and a trench pattern on the electrode; and

forming a second electrode layer on the function layer and the trench pattern.

8. The manufacturing method according to claim 7 wherein the step of forming a function layer and a trench pattern includes the steps of: forming the function layer; forming a photoresist layer on the function layer; and patterning the photoresist layer into the trench pattern.

9. The manufacturing method according to claim 7, further comprising the step of introducing, along the trench pattern, at least a second function layer having a composition different from a composition of the function layer.

10. The manufacturing method according to claim 7, further comprising the step of performing doping for the function layer by supplying a dopant solution along the trench pattern.

11. The manufacturing method according to claim 10 wherein the step of performing doping for the function layer by supplying a dopant solution includes

the steps of: supplying the dopant solution along the trench pattern; and dispersing the dopant into the function layer by heating the function layer.

12. The manufacturing method according to claim 10 wherein the step of performing doping includes the step of supplying different types of dopant into areas of the function layer, the areas being spaced by a wall of the trench pattern.